

Serial No. 10/735,765
November 30, 2004
Reply to the Office Action dated September 1, 2004
Page 2 of 7

AMENDMENTS TO THE CLAIMS:

This listing of claims will replace all prior versions, and listings, of claims in the application:

LISTING OF CLAIMS:

Claim 1 (currently amended): A variable resistor comprising:
an insulating substrate having a substantially arch-shaped resistor provided on a surface thereof; and
a sliding contact rotatably attached to the insulating substrate; wherein the sliding contact includes a body including a contact arm sliding over the resistor and a disk section for supporting the contact arm and a driver plate overlapping the body for being operated by a tool; and
a step disposed in a portion of the driver plate opposing a contact of the contact arm such that a gap between the portion of the driver plate having the step disposed therein and the contact arm is greater than a gap between a portion of the driver plate not having the step disposed therein and the contact arm; and the portion of the driver plate having the step disposed therein has a thickness that is less than a thickness of the remainder of the driver plate.

Claim 2 (original): A variable resistor according to Claim 1, wherein the step is defined by a recess provided in the driver plate.

Claim 3 (original): A variable resistor according to Claim 1, wherein the insulating substrate is made of at least one of a thermoplastic resin and a thermo-setting resin.

Serial No. 10/735,765
November 30, 2004
Reply to the Office Action dated September 1, 2004
Page 3 of 7

Claim 4 (original): A variable resistor according to Claim 1, further comprising stationary-side terminals provide on a top surface of the insulating substrate such that conduction portions of the stationary-side terminals are exposed.

Claim 5 (original): A variable resistor according to Claim 4, wherein the resistor is defined by carbon coated on a top surface of the insulating substrate in a substantially arch-shaped configuration so as to cover the conduction portions of the stationary-side terminals.

Claim 6 (original): A variable resistor according to Claim 4, wherein the stationary-side terminals are made of a highly conductive material, and the stationary-side terminals are plated with a noble metal to improve solder wettability.

Claim 7 (original): A variable resistor according to Claim 1, wherein the driving plate includes a substantially cross-shaped engagement hole for being operated by the tool.

Claim 8 (original): A variable resistor according to Claim 1, wherein the contact arm has a semi-circular shape.

Claim 9 (original): A variable resistor according to Claim 1, wherein the disk section is folded backwards from an external edge of the driving plate.

Claim 10 (original): A variable resistor according to Claim 9, wherein the contact arm is provided at an external edge of the disk section opposite to the portion of the disk that is folded backwards from the external edge of the driving plate.

Serial No. 10/735,765
November 30, 2004
Reply to the Office Action dated September 1, 2004
Page 4 of 7

Claim 11 (original): A variable resistor according to Claim 1, wherein the sliding contact is made of a highly conductive material having spring characteristics.

Claim 12 (original): A variable resistor according to Claim 1, further comprising a variable-side terminal including an eyelet portion, wherein the disk section is provided with a fitting hole at an approximate center thereof for fitting to the eyelet portion of the variable-side terminal.

Claim 13 (original): A variable resistor according to Claim 12, wherein the sliding contact is rotatably attached to the insulating substrate by outwardly caulking the eyelet portion of the variable-side terminal.

Claim 14 (original): A variable resistor according to Claim 1, wherein the contact arm includes a protruding contact provided at an approximate center thereof, such that the contact is brought into contact with the resistor.

Claim 15 (original): A variable resistor according to Claim 1, wherein the insulating substrate is a ceramic insulating substrate.

Claim 16 (original): A variable resistor according to Claim 15, wherein a top surface of the ceramic insulating substrate is coated with cermet in a substantially arch-shaped configuration to define the resistor.